STIC Search Report
EIC 1700

STIC Database Tracking Number: 96293

TO: Katarzyna Wyrozebski Lee
Location: CP3 5E09
Art Unit : 1714
June 10, 2003

Case Serial Number: 09/923533

From: Kathleen Fuller
Location: EIC 1700
CP3/4 3D62
Phone: 308-4290

Kathleen.Fuller@uspto.gov

Search Notes

The structures in claims 2 and 5 are not exact compounds but Markush structures. Therefore I did a structure search for compounds of the types covered and combined the structures with the utility.

1714 CP3 5E09 96293

Fuller, Kathleen

77177

From: Wyrozebski, Katarzyna
Sent: Tuesday, June 10, 2003 11:40 AM
To: Fuller, Kathleen
Subject: search

703/306-5875

US ~~US~~2002

Hi Kathleen,

I was wondering if you would be kind to help me find a compound that is in ~~PGPUB~~ 2002042462. Claim 2 and 5 show the actual chemical structure.

The application number 09/923533, inventor is NOHARA, filing date 8/8/2001, priority date 8/20/2000.

Additive is utilized in rubber composition for pneumatic tire.

THank you

Kat.

Katarzyna Wyrozebski-Lee
U.S. Patent and Trademark Office
(703) 306-5875

EIC1700

Search Results Feedback Form (Optional)

Scientific & Technical Information Center

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please contact *the EIC searcher* who conducted the search *or contact*:

Kathleen Fuller, Team Leader, 308-4290, CP3/4 3D62

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* [ ] *Example:* [1713]
- *Relevant prior art **found**, search results used as follows:*
  - [ ] 102 rejection
  - [ ] 103 rejection
  - [ ] Cited as being of interest.
  - [ ] Helped examiner better understand the invention.
  - [ ] Helped examiner better understand the state of the art in their technology.

  Types of relevant prior art found:
  - [ ] Foreign Patent(s)
  - [ ] Non-Patent Literature
    (journal articles, conference proceedings, new product announcements etc.)
- *Relevant prior art **not found**:*
  - [ ] Results verified the lack of relevant prior art (helped determine patentability).
  - [ ] Search results were not useful in determining patentability or understanding the invention.

Other Comments:

Drop off completed forms in **CP3/4 - 3D62** .

=> FILE REG
FILE 'REGISTRY' ENTERED AT 15:24:03 ON 10 JUN 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 9 JUN 2003 HIGHEST RN 528266-88-8
DICTIONARY FILE UPDATES: 9 JUN 2003 HIGHEST RN 528266-88-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

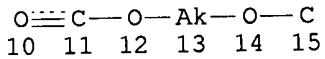
Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> FILE HCAPLUS
FILE 'HCAPLUS' ENTERED AT 15:24:08 ON 10 JUN 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

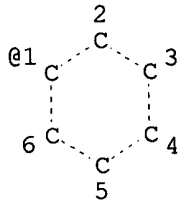
FILE COVERS 1907 - 10 Jun 2003 VOL 138 ISS 24
FILE LAST UPDATED: 9 Jun 2003 (20030609/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L13
L3 STR



structure query covered Claims 2 and 5



Ak @8

COOH 9

G1 7

VAR G1=8/1
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

1,696 polymers found

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L4                SCR 2043
L6                SCR 1992
L9          1696 SEA FILE=REGISTRY SSS FUL L3 AND L4 NOT L6
L10          909 SEA FILE=HCAPLUS ABB=ON  L9
L11           37 SEA FILE=HCAPLUS ABB=ON  L10(L)MOA/RL
L13            8 SEA FILE=HCAPLUS ABB=ON  L11 AND (RUBBER? OR ELASTOMER?)/SC,SX,
                 AB,BI
```

8 CA references

=> D L13 ALL 1-8 HITSTR

L13 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2003 ACS
AN 2003:309358 HCAPLUS
DN 138:322527
TI Natural **rubber** master batches with good viscosity stability, and their manufacture
IN Nohara, Daisuke; Tsuchihashi, Masaaki; Nishi, Isao; Takano, Tetsuo
PA Bridgestone Corp., Japan; Kao Corp.
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08L007-00
ICS C08J003-22; C08K003-04; C08K003-34; C08K005-10; C08L071-02
CC 39-9 (Synthetic **Elastomers** and Natural **Rubber**)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI JP 2003119319 A2 20030423 JP 2001-310496 20011005
PRAI JP 2001-310496 20011005

AB The master batches contain aliph. polycarboxylic acid (poly)oxyalkylene esters and/or B(CO2H)n[CO2(R1O)mR2]p(R3)q (m, n, p .gtoreq. 1; q .gtoreq. 0; n + p + q = 6-8; B = arom. ring; R1 = alkylene; R2 = alkyl, alkenyl, alkylaryl, acyl; R3 = H, alkyl, alkenyl) and 10-200 phr fillers. Thus, a master batch comprising natural **rubber** 100, maleic acid mono(polyoxypropylene lauryl ether) ester 5, and carbon black 100 parts showed Mooney viscosity 94 and 100 before and after storage at room temp. for 60 days, resp., and good handling property.

ST natural **rubber** polyoxyalkylene polycarboxylate viscosity stability; polyoxypropylene maleate natural **rubber** master batch

IT Carbon black, uses
RL: MOA (Modifier or additive use); USES (Uses)
(filler; natural **rubber** master batches contg. polyoxyalkylene polycarboxylates as viscosity stabilizers)

IT Polyoxyalkylenes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(hydroxy-terminated, esters with polycarboxylic acids; natural **rubber** master batches contg. polyoxyalkylene polycarboxylates as viscosity stabilizers)

IT Stabilizing agents
(natural **rubber** master batches contg. polyoxyalkylene polycarboxylates as viscosity stabilizers)

IT Natural **rubber**, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(natural **rubber** master batches contg. polyoxyalkylene polycarboxylates as viscosity stabilizers)

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(polycarboxylic, esters with hydroxy-terminated polyoxyalkylenes; natural **rubber** master batches contg. polyoxyalkylene polycarboxylates as viscosity stabilizers)

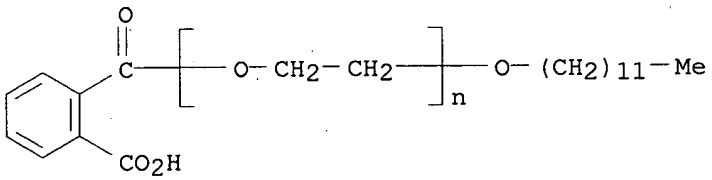
IT 7631-86-9, Silica, uses
RL: MOA (Modifier or additive use); USES (Uses)
(filler; natural **rubber** master batches contg. polyoxyalkylene polycarboxylates as viscosity stabilizers)

IT 53123-50-5 **124934-00-5** 397874-03-2 514209-39-3 514209-41-7
RL: **MOA (Modifier or additive use)**; USES (Uses)
(natural **rubber** master batches contg. polyoxyalkylene polycarboxylates as viscosity stabilizers)

IT **124934-00-5**
RL: **MOA (Modifier or additive use)**; USES (Uses)
(natural **rubber** master batches contg. polyoxyalkylene polycarboxylates as viscosity stabilizers)

RN 124934-00-5 HCAPLUS

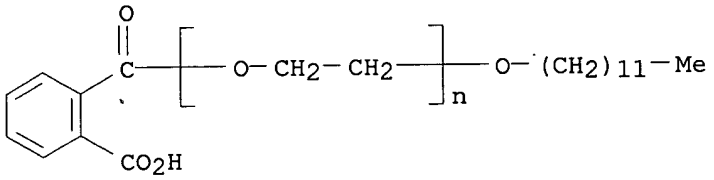
CN Poly(oxy-1,2-ethanediyl), .alpha.-(2-carboxybenzoyl)-.omega.-(dodecyloxy)-(9CI) (CA INDEX NAME)



L13 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2003 ACS
AN 2003:309357 HCAPLUS
DN 138:322514
TI Gelation-resistant natural **rubbers** and their manufacture
IN Nohara, Daisuke; Tsuchihashi, Masaaki; Nishi, Isao; Takano, Tetsuo
PA Bridgestone Corp., Japan; Kao Corp.
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08L007-00
ICS C08J003-20; C08L071-02
CC 39-3 (Synthetic **Elastomers** and Natural **Rubber**)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003119318	A2	20030423	JP 2001-310451	20011005
PRAI JP 2001-310451		20011005		

AB The **rubbers** contain aliph. polycarboxylic acid (poly)oxyalkylene esters and/or B(CO2H)n[CO2(R1O)mR2]p(R3)q (m, n, p .gtoreq. 1; q .gtoreq. 0; n + p + q = 6-8; B = arom. ring; R1 = alkylene; R2 = alkyl, alkenyl, alkylaryl, acyl; R3 = H, alkyl, alkenyl). Thus, 3 parts maleic acid mono(polyoxypropylene lauryl ether) ester was added to 100 parts natural **rubber** latex to give **rubber** showing gel content 17% and Mooney viscosity 78 after storage at room temp. for 60 days.
ST natural **rubber** additive polyoxyalkylene polycarboxylate ester; gelation prevention natural **rubber** polyoxypropylene maleate
IT Natural **rubber**, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(gelation-resistant natural **rubbers** contg. polycarboxylic acid polyoxyalkylene esters)
IT Polyoxyalkylenes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(hydroxy-terminated, esters with polycarboxylic acids; gelation-resistant natural **rubbers** contg. polycarboxylic acid polyoxyalkylene esters)
IT Gelation agents
(inhibitors; gelation-resistant natural **rubbers** contg. polycarboxylic acid polyoxyalkylene esters)
IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(polycarboxylic, esters with hydroxy-terminated polyoxyalkylenes; gelation-resistant natural **rubbers** contg. polycarboxylic acid polyoxyalkylene esters)
IT 53123-50-5 **124934-00-5** 136972-37-7 514209-39-3 514209-41-7
RL: **MOA (Modifier or additive use)**; USES (Uses)
(gelation-resistant natural **rubbers** contg. polycarboxylic acid polyoxyalkylene esters)
IT **124934-00-5**
RL: **MOA (Modifier or additive use)**; USES (Uses)
(gelation-resistant natural **rubbers** contg. polycarboxylic acid polyoxyalkylene esters)
RN 124934-00-5 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(2-carboxybenzoyl)-.omega.-(dodecyloxy)- (9CI) (CA INDEX NAME)



L13 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2003 ACS
AN 2003:301135 HCAPLUS
DN 138:322536
TI **Rubber** compositions for tire treads
IN Nohara, Daisuke; Tsuchihashi, Masaaki; Nishi, Isao; Takano, Tetsuo
PA Bridgestone Corporation, Japan; Kao Corporation
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C08L007-00
ICS C08L009-00; C08K005-00
CC 39-13 (Synthetic **Elastomers** and Natural **Rubber**)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003031510	A1	20030417	WO 2002-JP10376	20021004

W: CN, US
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR

PRAI JP 2001-310497 A 20011005

AB Title compns., having good filler dispersibility and improved storage modulus without impairing the processability, modulus contain (A) natural and/or diene **rubbers**, (B) inorg. fillers, and (C) compds. contg. .gtoreq.1 the **rubber**-reactive groups (RR) and .gtoreq.2 the filler-adsorbing groups. (e.g., COOH groups) or (D) unsatd. carboxylic acid (derivs.) contg. .gtoreq.1 the RR and .gtoreq.1 NH2 groups, or (E) ethoxylated or propoxylated (meth)acrylates. A compn. contg. SBR 1502 100, carbon black 10, SiO2 40, S 1.5, and malic acid monomaleate (I) 2 parts showed JIS K 6300 Mooney viscosity of 103 and was vulcanized to form a void- and scratch-free sheet with storage modulus index 147% (based on a sheet prepd. from I-free similar compn.).

ST carboxy contg ester storage modulus promoter filler **rubber** compn; dialkylaminoalkyl ester storage modulus promoter filler **rubber** compn; ethoxylated acrylate storage modulus promoter filler **rubber** compn; propoxylated acrylate storage modulus promoter filler **rubber** compn

IT Natural **rubber**, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(RSS 3; **rubber** compns. contg. filler and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT Styrene-butadiene **rubber**, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(SBR 1502; **rubber** compns. contg. filler and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT Polyesters, uses
RL: MOA (Modifier or additive use); USES (Uses)
(oligomeric COOH-terminated; **rubber** compns. contg. fillers and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT Fillers
(**rubber** compns. contg. filler and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT Carbon black, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**rubber** compns. contg. filler and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT Esters, uses
RL: MOA (Modifier or additive use); USES (Uses)
(**rubber** compns. contg. fillers and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT Amines, uses
RL: MOA (Modifier or additive use); USES (Uses)
(tertiary, in diacid (ester)-contg. compns.; **rubber** compns. contg. fillers and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT 110-16-7, Maleic acid, uses 3990-03-2, Monoethyl maleate 512185-71-6
RL: MOA (Modifier or additive use); USES (Uses)
(compns. also contg. tert-amines; **rubber** compns. contg. filler and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT 7631-86-9, Silica, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(filler; **rubber** compns. contg. filler and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT 1120-24-7, Dimethyldecylamine
RL: MOA (Modifier or additive use); USES (Uses)
(in diacid (ester)-contg. compns.; **rubber** compns. contg. filler and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT 110-16-7D, Maleic acid, reaction products with oligomeric glycol-diacid copolymers 15498-42-7, Ethylene glycol dimaleate 24936-97-8D, Adipic acid-1,4-butanediol copolymer, sru, oligomeric, maleic acid-terminated 24938-77-0D, 1,4-Butanediol-maleic acid copolymer, sru, oligomeric, maleic acid-terminated 25103-87-1D, Adipic acid-1,4-butanediol copolymer, oligomeric, maleic acid-terminated 25949-13-7D, Ethylene glycol-maleic acid copolymer, sru, oligomeric, maleic acid-terminated 26316-53-0D, Ethylene glycol-maleic acid copolymer, oligomeric, maleic acid-terminated 27966-78-5D, 1,4-Butanediol-maleic acid copolymer, oligomeric, maleic acid-terminated 57079-11-5 58064-50-9, Glycerol dimaleate 86367-74-0 102329-39-5 185963-11-5 **511532-09-5** 512185-69-2 512185-70-5
RL: **MOA (Modifier or additive use)**; USES (Uses)
(**rubber** compns. contg. filler and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT 30697-40-6 51252-88-1, Mono(2-Methacryloyloxyethyl) hexahydrophthalate 77439-74-8 511532-10-8 511532-11-9
RL: MOA (Modifier or additive use); USES (Uses)
(**rubber** compns. contg. fillers and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

IT 9003-55-8
RL: POF (Polymer in formulation); TEM (Technical or engineered material

use); USES (Uses)
(styrene-butadiene **rubber**, SBR 1502; **rubber** compns. contg. filler and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

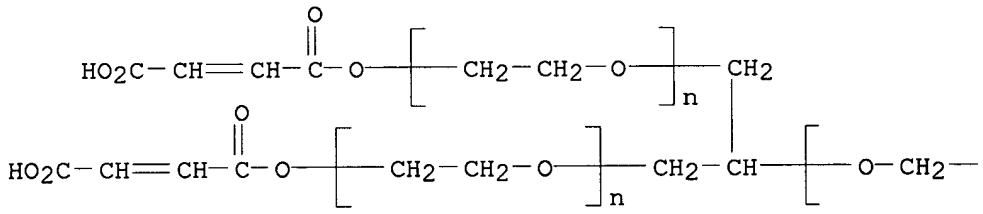
(1) Bridgestone Corp; JP 61-221242 A 1986 HCAPLUS
(2) Bridgestone Corp; JP 07-26066 A 1995 HCAPLUS
(3) Bridgestone Corp; JP 10-251448 A 1998 HCAPLUS
(4) Bridgestone Corp; JP 2000296702 A 2000 HCAPLUS
(5) Otsuka Chemical Co Ltd; DE 3819827 A 1988 HCAPLUS
(6) Otsuka Chemical Co Ltd; US 4955966 A1 1988 HCAPLUS
(7) Otsuka Chemical Co Ltd; JP 63-309538 A 1988 HCAPLUS
(8) Sumitomo Chemical Co Ltd; JP 06-306211 A 1994 HCAPLUS

IT **511532-09-5**
RL: **MOA (Modifier or additive use)**; USES (Uses)
(**rubber** compns. contg. filler and COOH-contg. sp. compds. as storage modulus promoters for vulcanized **rubber** smoothness)

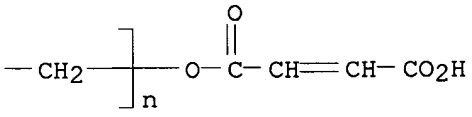
RN 511532-09-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-[[(2Z)-3-carboxy-1-oxo-2-propenyl]oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L13 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:368569 HCAPLUS

DN 136:370921

TI Natural **rubber** produced from latex and composition comprising the same

IN Toratani, Hirotoshi; Iwafune, Seiichiro; Kijima, Ken; Maeda, Hiromi; Hashimoto, Takatsugu; Yanagisama, Kazuhiro

PA Bridgestone Corporation, Japan

SO PCT Int. Appl., 57 pp.
CODEN: PIXXD2

DT Patent
LA English
IC ICM C08L007-00
CC 39-3 (Synthetic **Elastomers** and Natural **Rubber**)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002038667	A2	20020516	WO 2001-JP9552	20011031
	WO 2002038667	A3	20030320		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002010988	A5	20020521	AU 2002-10988	20011031
PRAI	JP 2000-339233	A	20001107		
	JP 2000-339234	A	20001107		
	JP 2000-353124	A	20001120		
	JP 2000-353125	A	20001120		
	JP 2000-353126	A	20001120		
	JP 2000-353127	A	20001120		
	WO 2001-JP9552	W	20011031		

OS MARPAT 136:370921
AB Provided is a natural **rubber** obtained by drying a gathered natural **rubber** latex without coagulating, wherein a drum dryer and/or a conveyor type dryer are used for drying. Further, provided are a prodn. process for a natural **rubber**-filler mixt. prepd. by adding at least one of carbon black and inorg. fillers to a natural **rubber** latex, a natural **rubber** added a viscosity stabilizer comprising hydrazide compds. or esters of arom. or aliph. polycarboxylic acid derivs. to these natural **rubber** and natural **rubber**-filler mixt., and a **rubber** compn. which is prepd. using the above natural **rubbers** and which is excellent in productivity, abrasion resistance and fracture resistance.
ST latex natural **rubber** process drum dryer hydrazide viscosity stabilizer
IT Carbon black, uses
Kaolin, uses
RL: MOA (Modifier or additive use); USES (Uses)
(filler; natural **rubber** produced from latex and compn. comprising same)
IT Stabilizing agents
(for viscosity; natural **rubber** produced from latex and compn. comprising same)
IT Fillers
(inorg.; natural **rubber** produced from latex and compn. comprising same)
IT Drying apparatus
(natural **rubber** produced from latex and compn. comprising same)
IT Natural **rubber**, properties
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PROC (Process); USES (Uses)
(natural **rubber** produced from latex and compn. comprising

same)

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(polycarboxylic acid esters, viscosity stabilizers; natural **rubber** produced from latex and compn. comprising same)

IT Viscosity
(stabilizers; natural **rubber** produced from latex and compn. comprising same)

IT Esters, uses
Hydrazides
RL: MOA (Modifier or additive use); USES (Uses)
(viscosity stabilizers; natural **rubber** produced from latex and compn. comprising same)

IT 7631-86-9, Nipsil VN 3, uses
RL: MOA (Modifier or additive use); USES (Uses)
(colloidal, filler; natural **rubber** produced from latex and compn. comprising same)

IT 471-34-1, Calcium carbonate, uses 14807-96-6, Talc, uses 21645-51-2, Higilite H 43M, uses 403805-80-1, Polyfil 40
RL: MOA (Modifier or additive use); USES (Uses)
(filler; natural **rubber** produced from latex and compn. comprising same)

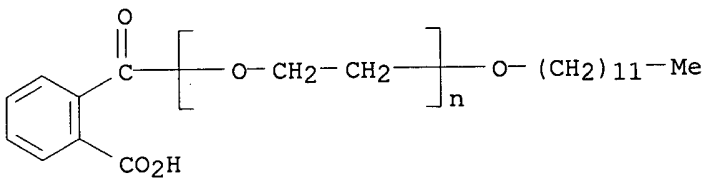
IT 2651-42-5, Lactic hydrazide 5399-22-4, Lauroylhydrazide 5818-15-5, Propionic hydrazide 17181-26-9, Monostearylphthalate **124934-00-5**, Mono(polyethylene glycol lauryl ether) phthalate
RL: **MOA (Modifier or additive use)**; USES (Uses)
(viscosity stabilizer; natural **rubber** produced from latex and compn. comprising same)

IT 613-94-5, Benzohydrazide 1068-57-1, Acetohydrazide 2619-88-7, Palmitic acid hydrazide 3290-99-1, p-Methoxybenzohydrazide 3538-65-6, Butyric hydrazide 3619-22-5, p-Toluic acid hydrazide 3645-45-2 4130-54-5, Stearohydrazide 6952-93-8, Cyclopropanecarbohydrazide 7658-80-2, o-Toluic acid hydrazide 13050-47-0, m-Toluic acid hydrazide 25774-75-8, Cycloheptanecarboxylic acid hydrazide 27389-49-7, 3,5-Dimethylbenzoylhydrazide 38941-47-8, Cyclohexanecarbohydrazide 43038-45-5, 1-Naphthoylhydrazide 98069-56-8, Cyclobutanecarboxylic acid hydrazide
RL: MOA (Modifier or additive use); USES (Uses)
(viscosity stabilizers; natural **rubber** produced from latex and compn. comprising same)

IT **124934-00-5**, Mono(polyethylene glycol lauryl ether) phthalate
RL: **MOA (Modifier or additive use)**; USES (Uses)
(viscosity stabilizer; natural **rubber** produced from latex and compn. comprising same)

RN 124934-00-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(2-carboxybenzoyl)-.omega.-(dodecyloxy)- (9CI) (CA INDEX NAME)



L13 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:119310 HCAPLUS
DN 136:168812
TI Additive composition for **rubber** compositions for tires
IN Nohara, Daisuke; Shirasaka, Jingo; Nishi, Isao; Tsuchihashi, Masaaki; Takano, Tetsuo
PA Bridgestone Corporation, Japan; Kao Corporation
SO Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C08K005-11
ICS C08K005-12; C08K005-1539; C08L021-00; C08L009-00; C08L007-00; B60C001-00
CC 39-9 (Synthetic **Elastomers** and Natural **Rubber**)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1179561	A1	20020213	EP 2001-306713	20010806
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 2002042462	A1	20020411	US 2001-923533	20010808
	JP 2002121330	A2	20020423	JP 2001-240962	20010808
	JP 2002256113	A2	20020911	JP 2001-373309	20011206
PRAI	JP 2000-239503	A	20000808		
	JP 2000-397565	A	20001227		

OS MARPAT 136:168812
AB An additive for a **rubber** compn. consists essentially of an ester of (i) an aliph. polyvalent carboxylic acid with (iii) a (poly)oxyalkylene deriv., and having at least one carboxyl group in its mol., or an ester of (ii) an arom. polyvalent carboxylic acid with (iii) a (poly)oxyalkylene deriv., and having at least one carboxyl group bonded to an arom. ring in its mol. And also, it relates to an additive compn., a **rubber** compn. and a pneumatic tire using such an additive for a **rubber** compn.
ST polyoxyalkylene polycarboxylic acid ester additive **rubber** tire
IT Tires
(additive compn. for **rubber** compns. for tires)
IT **Rubber**, uses
RL: POF (Polymer in formulation); USES (Uses)
(additive compn. for **rubber** compns. for tires)
IT Natural **rubber**, properties
Styrene-butadiene **rubber**, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(additive compn. for **rubber** compns. for tires)
IT Polyoxyalkylenes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(polycarboxylic acid esters; additive compn. for **rubber** compns. for tires)
IT Carboxylic acids, properties
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(polycarboxylic, aliph., (poly)oxyalkylene esters; additive compn. for **rubber** compns. for tires)
IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(polycarboxylic, arom., (poly)oxyalkylene esters; additive compn. for **rubber** compns. for tires)
IT **37314-86-6** 53123-50-5 397332-14-8 397874-03-2

397874-04-3 397874-05-4 397874-06-5
397874-07-6 397874-08-7 397874-09-8
397874-10-1
RL: **MOA (Modifier or additive use)**; USES (Uses)
(additive compn. for **rubber** compns. for tires)

IT 9003-55-8
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(styrene-butadiene **rubber**, additive compn. for **rubber** compns. for tires)

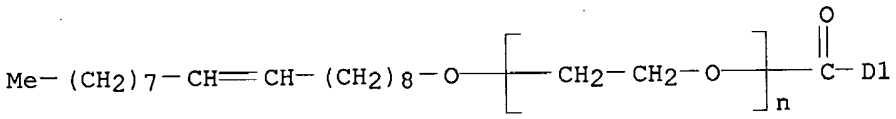
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Bridgestone Corp; EP 1026196 A 2000 HCAPLUS
(2) Kao Corp; EP 0867468 A 1998 HCAPLUS
(3) Kao Corp; EP 0869145 A 1998 HCAPLUS

IT **37314-86-6 397874-04-3 397874-05-4**
397874-06-5 397874-07-6 397874-08-7
397874-10-1
RL: **MOA (Modifier or additive use)**; USES (Uses)
(additive compn. for **rubber** compns. for tires)

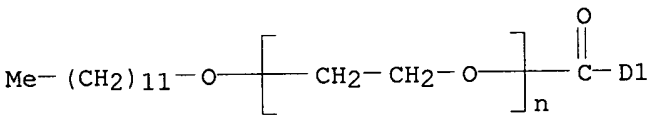
RN 37314-86-6 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(carboxybenzoyl)-.omega.-[(9Z)-9-octadecenyloxy]- (9CI) (CA INDEX NAME)

D1—CO_2H



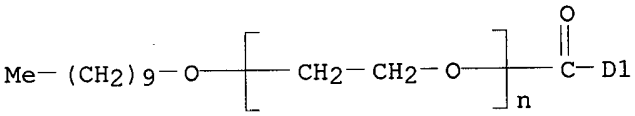
RN 397874-04-3 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(carboxybenzoyl)-.omega.-(dodecyloxy)- (9CI) (CA INDEX NAME)

D1—CO_2H



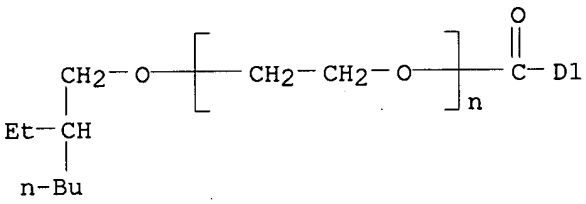
RN 397874-05-4 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(carboxybenzoyl)-.omega.-(decyloxy)-
(9CI) (CA INDEX NAME)

D1—CO_2H



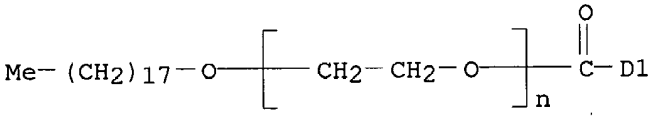
RN 397874-06-5 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(carboxybenzoyl)-.omega.-[(2-
ethylhexyl)oxy]- (9CI) (CA INDEX NAME)

D1—CO_2H

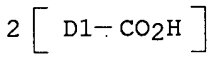


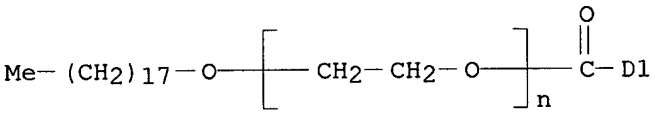
RN 397874-07-6 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(carboxybenzoyl)-.omega.-(octadecyloxy)-(9CI) (CA INDEX NAME)

D1—CO_2H

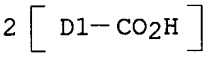


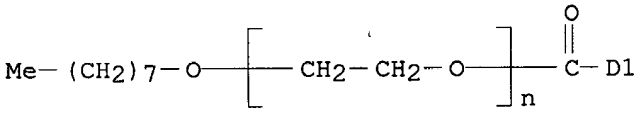
RN 397874-08-7 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(dicarboxybenzoyl)-.omega.-(octadecyloxy)- (9CI) (CA INDEX NAME)





RN 397874-10-1 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(dicarboxybenzoyl)-.omega.-(octyloxy)-(9CI) (CA INDEX NAME)





L13 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:765467 HCAPLUS
DN 133:323089
TI Epoxy- and hydrogenated polybutadiene-containing polymers and their thermosetting compositions
IN Sato, Atsushi; Sato, Hiroshi; Takemoto, Masayuki; Sakamoto, Hiroshi; Yokota, Tadahiko; Orikabe, Hiroshi
PA Nippon Oil and Fats Co., Ltd., Japan; Ajinomoto Co., Inc.
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08G059-14
ICS C08G059-40; C08G081-02; C08L063-00; H05K003-28
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000302839	A2	20001031	JP 1999-114733	19990422
PRAI	JP 1999-114733		19990422		

AB The thermosetting compns., useful for elec. insulating overcoats for flexible printed circuit boards, contain polymers (epoxy equiv. 200-2000 g/mol) composed of carboxy-contg. hydrogenated polybutadiene units (A) (Mn 500-10,000, acid value 10-250 mgKOH/g) and polymer units (B) from epoxy-contg. vinyl monomers, where the carboxyl groups of A are bonded to the epoxy groups of B at .ltoreq.0.2 equiv based on 1 equiv of the epoxy groups, and compds. having .gtoreq.2 CO2CR1(CHR2R3)Y1R4 groups (R1-R3 = H, C1-18 org. group; R4 = C1-18 org. group; R3R4 may form a heterocycle with Y1; Y1 = O, S). Thus, 15.0 parts CI 1000 (carboxy-contg. hydrogenated polybutadiene; acid value 49.2 mgKOH/g; Mn 1500) was heated with glycidyl methacrylate 13.8, styrene 7.6, Bu methacrylate 8.0, and Me methacrylate 5.6 parts in the presence of tert-Bu peroxylaurate and AIBN to give a polymer (epoxy equiv. 595.0 g/mol). A tetracarboxylic acid from pentaerythritol and methylhexahydrophthalic anhydride was treated with iso-Bu vinyl ether to give a tetracarboxylate ester. A compn. contg. 100 parts of the epoxy-contg. polymer and 38.1 parts of the tetracarboxylate ester formed a film showing good flexibility, good adhesion to a polyimide film and a Cu foil, high chem. resistance, and long pot life.

ST epoxy hydrogenated polybutadiene elec insulating coating; flexible printed circuit coating epoxy polybutadiene; acrylic epoxy polybutadiene elec insulating coating

IT Epoxy resins, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(acrylic, hydrogenated polybutadiene-contg.; thermosetting compns. contg. epoxy- and hydrogenated polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

IT Butadiene **rubber**, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(carboxy-terminated, hydrogenated, CI 1000, polymers with epoxy-contg. acrylic polymers; thermosetting compns. contg. epoxy- and hydrogenated polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

IT Coating materials
(chem. resistant; thermosetting compns. contg. epoxy- and hydrogenated polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

IT Electric insulators
(coatings; thermosetting compns. contg. epoxy- and hydrogenated polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

IT Printed circuit boards
(flexible; thermosetting compns. contg. epoxy- and hydrogenated polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

IT Crosslinking agents
(thermosetting compns. contg. epoxy- and hydrogenated polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

IT Coating materials
(topcoats; thermosetting compns. contg. epoxy- and hydrogenated

polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

IT 9003-17-2P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(butadiene **rubber**, carboxy-terminated, hydrogenated, CI 1000, polymers with epoxy-contg. acrylic polymers; thermosetting compns. contg. epoxy- and hydrogenated polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

IT 109-53-5DP, Isobutyl vinyl ether, addn. products with pentaerythritol or pentaerythritol-initiated polycaprolactone hexahydrophthalic anhydride half esters 151165-15-0P 173692-75-6DP, addn. products with iso-Bu vinyl ether 302907-11-5DP, .epsilon.-Caprolactone homopolymer, tetraester with pentaerythritol, half ester with hexahydrophthalic anhydride (1:4), addn. products with iso-Bu vinyl ether **302917-41-5DP**, addn. products with iso-Bu vinyl ether
RL: IMF (Industrial manufacture); **MOA (Modifier or additive use)**; RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(thermosetting compns. contg. epoxy- and hydrogenated polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

IT 80-62-6DP, Methyl methacrylate, polymers with carboxy-contg. hydrogenated polybutadiene and glycidyl-contg. vinyl monomers 97-88-1DP, Butyl methacrylate, polymers with carboxy-contg. hydrogenated polybutadiene and glycidyl-contg. vinyl monomers 100-42-5DP, Styrene, polymers with carboxy-contg. hydrogenated polybutadiene and glycidyl-contg. methacrylates 106-91-2DP, Glycidyl methacrylate, polymers with carboxy-contg. hydrogenated polybutadiene and vinyl monomers
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(thermosetting compns. contg. epoxy- and hydrogenated polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

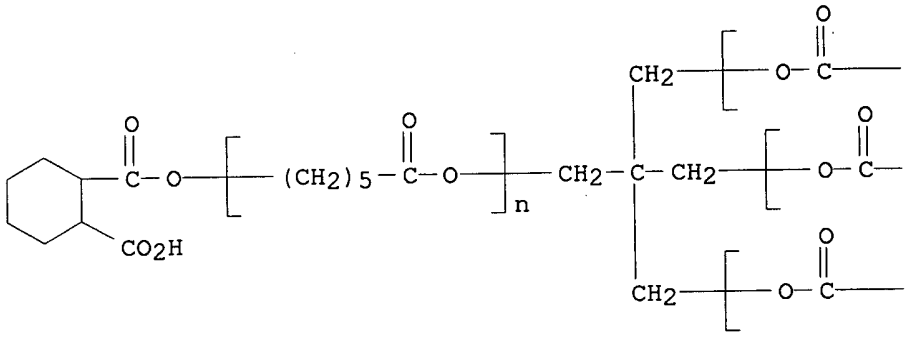
IT 51920-52-6P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(thermosetting compns. contg. epoxy- and hydrogenated polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

IT **302917-41-5DP**, addn. products with iso-Bu vinyl ether
RL: IMF (Industrial manufacture); **MOA (Modifier or additive use)**; RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(thermosetting compns. contg. epoxy- and hydrogenated polybutadiene-contg. polymers and polycarboxylates for overcoats for flexible printed circuit boards)

RN 302917-41-5 HCAPLUS

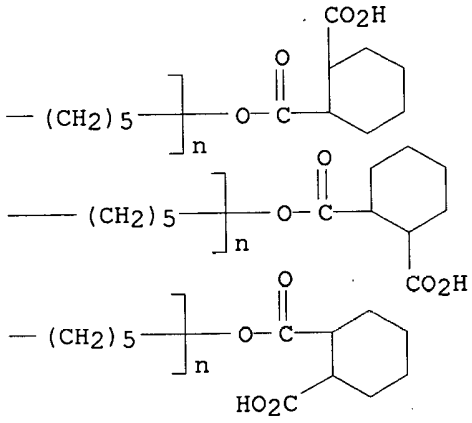
CN Poly[oxy(1-oxo-1,6-hexanediyl)], .alpha.-hydro-.omega.-[[(2-carboxymethylcyclohexyl)carbonyl]oxy]-, ester with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9CI) (CA INDEX NAME)

PAGE 1-A



4 (D1—Me)

PAGE 1-B



L13 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:484055 HCAPLUS
DN 133:122008
TI Decomposable reactive emulsifiers and their use in polymer modification
IN Hashimoto, Noriyuki; Nishitani, Hisayuki
PA Daiichi Kogyo Seiyaku Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C07D317-22
ICS B01F017-42; B01F017-52; C08F002-24; C08F008-00
CC 46-4 (Surface Active Agents and Detergents)

Section cross-reference(s): 35, 38, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000198782	A2	20000718	JP 1999-108424	19990415
PRAI	JP 1998-310232	A	19981030		

AB The emulsifiers when used in emulsion-type adhesives and coatings can improve their adhesive strength and resistance to water and weather, and when formulated with polymers can be sepd. after use by their decompn., are I-type compds. R1OCH2C[O(AO)nX]HCH2OC(O)C(Me):CH2 (R1 = ketalized 2,3-dihydroxypropyl group; A = C2-4 alkylene group; n = 0, 1-100; X = H, hydrophilic ionic groups). Thus, heating 2-tridecanone with glycerin in PhMe in the presence of p-toluenesulfonic acid at reflux for 24 h and working up have 2-methyl-2-undecyl-4-hydroxymethyl-1,3-dioxolane which was then heated with glycidyl methacrylate in the presence of an antioxidant and ethoxylated with ethylene oxide to give a compd. I (R1 = 2-methyl-2-undecyl-1,3-dioxolane-4-ylmethyl; A = C2H4; n = 30). Emulsion polymn. of vinyl acetate and Bu acrylate using the compd. I with an alk. pH adjusted by NaHCO3 gave a stable polymer emulsion.

ST decomposable emulsifying agent ketal glyceryl glycidyl methacrylate ethoxylate; reactive emulsifying agent ketal glyceryl glycidyl methacrylate ethoxylate

IT Polyoxyalkylenes, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic, acetal-contg.; decomposable reactive emulsifiers and use in polymer modification)

IT Adhesives
Coating materials
(decomposable reactive emulsifiers and use in polymer modification)

IT Styrene-butadiene **rubber**, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(decomposable reactive emulsifiers and use in polymer modification)

IT Polymerization
(emulsion; decomposable reactive emulsifiers and use in polymer modification)

IT ABS **rubber**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(graft; decomposable reactive emulsifiers and use in polymer modification)

IT Emulsifying agents
(reactive; decomposable reactive emulsifiers and use in polymer modification)

IT 106677-58-1P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(abs **rubber**, graft; decomposable reactive emulsifiers and use in polymer modification)

IT 284037-42-9P 284037-43-0P 284037-44-1P 284037-45-2P 284037-46-3P 284037-47-4P **284037-48-5P 284037-49-6P** 284037-50-9P 284037-51-0P 284037-52-1P 284661-19-4P 284661-21-8P 284661-23-0P 284661-24-1P
RL: IMF (Industrial manufacture); **MOA (Modifier or additive use)**; PREP (Preparation); USES (Uses)
(decomposable reactive emulsifiers and use in polymer modification)

IT 25067-01-0P, Butyl acrylate-vinyl acetate copolymer 25767-47-9P, Butyl

acrylate-styrene copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(decomposable reactive emulsifiers and use in polymer modification)

IT 1027-54-9P, 2-Undecyl-4-hydroxymethyl-1,3-dioxolane 1205-99-8P, 2-Heptyl-4-hydroxymethyl-1,3-dioxolane 4379-20-8P, 2-Pentyl-4-hydroxymethyl-1,3-dioxolane 5660-49-1P, 2-Heptadecyl-4-hydroxymethyl-1,3-dioxolane 14739-11-8P 138705-84-7P, 2-Methyl-2-undecyl-4-hydroxymethyl-1,3-dioxolane 262606-37-1P, 2,2-Dihexyl-4-hydroxymethyl-1,3-dioxolane
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; decomposable reactive emulsifiers and use in polymer modification)

IT 106-91-2, Glycidyl methacrylate
RL: RCT (Reactant); RACT (Reactant or reagent)
(intermediate; decomposable reactive emulsifiers and use in polymer modification)

IT 56-81-5, 1,2,3-Propanetriol, reactions 66-25-1, n-Hexanal 100-79-8 108-31-6, Maleic anhydride, reactions 112-54-9, n-Dodecanal 124-13-0, n-Octanal 462-18-0, 7-Tridecanone 593-08-8, 2-Tridecanone 638-66-4, n-Octadecanal 1633-83-6, 1,4-Butanesultone 3926-62-3, Sodium monochloroacetate 5329-14-6, Sulfamic acid 7757-83-7, Sodium sulfite
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; decomposable reactive emulsifiers and use in polymer modification)

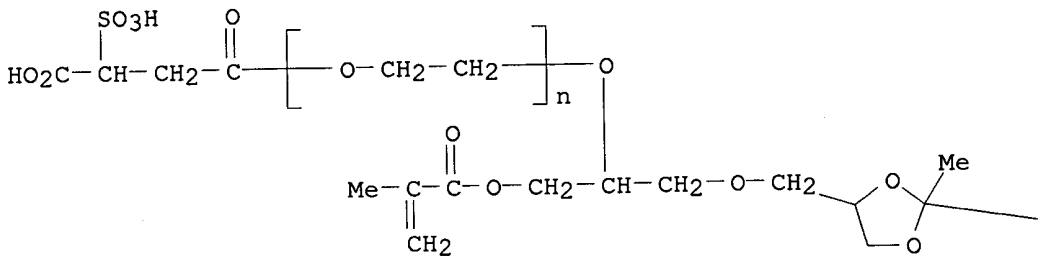
IT 106677-58-1P, Acrylonitrile-butadiene-styrene graft copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**rubber**; decomposable reactive emulsifiers and use in polymer modification)

IT 9003-55-8P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(styrene-butadiene **rubber**, decomposable reactive emulsifiers and use in polymer modification)

IT **284037-48-5P 284037-49-6P**
RL: IMF (Industrial manufacture); **MOA (Modifier or additive use)**; PREP (Preparation); USES (Uses)
(decomposable reactive emulsifiers and use in polymer modification)

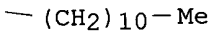
RN 284037-48-5 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(3-carboxy-1-oxo-3-sulfopropyl)-.omega.-[1-[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-2-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]ethoxy]-, disodium salt (9CI) (CA INDEX NAME)

PAGE 1-A

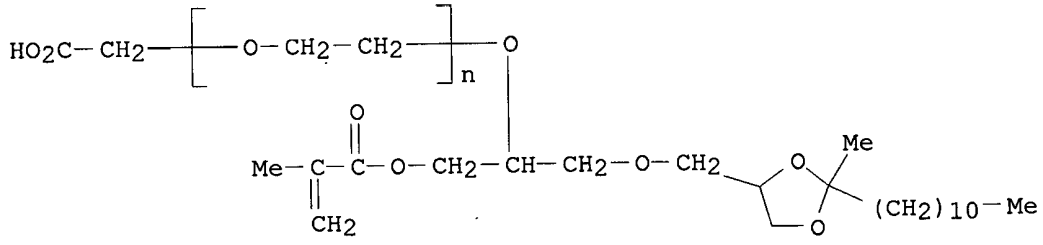


●2 Na

PAGE 1-B



RN 284037-49-6 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(carboxymethyl)-.omega.-[1-[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-2-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]ethoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

L13 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2003 ACS
AN 1999:7732 HCAPLUS
DN 130:126179
TI Electrically conductive antistatic white **rubber** compositions containing alkali metal salts or alkaline earth metal salts with good

resistance to bleeding and vulcanized compositions therefrom
IN Sasa, Tatsuo; Natsuyama, Nobuhiro
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CC 39-9 (Synthetic **Elastomers** and Natural **Rubber**)
Section cross-reference(s): 74

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PI	JP 10338779	A2	19981222	JP 1997-275736	19971008
PRAI	JP 1996-304515		19961115		
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AB The compns. comprise (A) ethylene-.alpha.-olefin copolymer **rubber** and (B) mixts. contg. fillers and Y[CO2(ZO)jR1]k and/or R2CO(OCH2CR4H)pOCOR3 [Y = (substituted) C2-22 aliph., alicyclic, or arom. carboxylic acid residue or epoxycyclohexanecarboxylic acid residue; R2 = H, C1-15 linear or branched alkyl; Z = C2-4 alkylene; j = 1-30; k = 1-4; R2, R3 = C1-15 alkyl or alkenyl; R4 = H, Me; p = 2-20], alkali metal salts and/or alk. earth metal salts. The compns. are useful for copying machine rolls, sealing materials for elec. parts, and elec. conductive sheets (no data). A compn. contg. 100 parts ethylene-5-ethylidene-2-norbornene-propylene copolymer **rubber** and 100 parts 75:25 (wt. ratio) mixt. contg. CaCO3 and 49:1:1 mixt. of bis[2-(2-butoxyethoxy)ethyl] adipate, bis[2-(2-butoxyethoxy)ethyl] thiodipropionate, and LiClO4 was kneaded and vulcanized 15 min at 160.degree. to give a compn. showing vol. resistivity 6.0 x 106 .OMEGA..cm and showing no surface bleeding.

ST ethylene olefin copolymer **rubber** elec conductive; polyolefin **rubber** compn elec conductive; alkali metal salt conductive filler **rubber**; alk earth metal salt conductive filler; lithium perchlorate elec conductive filler **rubber**; barium perchlorate elec conductive filler **rubber**; copying machine roll conductive polyolefin **rubber**; bisbutoxyethyl adipate plasticizer polyolefin **rubber**; bleeding resistance conductive ethylene copolymer **rubber**

IT Polyolefin **rubber**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(alkene-ethylene; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom)

IT Plasticizers
(alkylene glycol esters; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom)

IT Fillers
(calcium carbonate or silica; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom for)

IT EPDM **rubber**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(dicyclopentadiene-ethylene-propene; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom)

IT Conducting polymers
(elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom)

IT Alkali metal salts
Alkaline earth salts
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(elec. conductive fillers; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom)

IT EPDM **rubber**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(ethylene-ethylidenenorbornene-propene; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom)

IT Sealing compositions
(for elec. parts; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom for)

IT Electrophotographic apparatus
(rolls; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom for)

IT 546-93-0, Magnesium carbonate 7791-03-9, Lithium perchlorate 10377-51-2, Lithium iodide 13465-95-7, Barium perchlorate
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(conductive filler; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom)

IT 471-34-1, Calcium carbonate, uses 7631-86-9, Silica, uses
RL: MOA (Modifier or additive use); USES (Uses)
(filler; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom)

IT 106-10-5 141-17-3, Bis[2-(2-butoxyethoxy)ethyl] adipate **37684-52-9**, Polyethylene glycol diphthalate 37684-53-0, Polyethylene glycol diadipate 40021-83-8, Bis(polyethylene glycol) adipate 54406-23-4 97171-76-1 129695-66-5, Bis[2-(2-butoxyethoxy)ethyl] thiodipropionate
RL: **MOA (Modifier or additive use)**; PRP (Properties); USES (Uses)
(plasticizer; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom)

IT 25034-71-3, Dicyclopentadiene-ethylene-propylene copolymer 25038-36-2, Ethylene-5-ethylidene-2-norbornene-propylene copolymer
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(**rubber**; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good

resistance to bleeding and vulcanized compns. therefrom)

IT **37684-52-9,** Polyethylene glycol diphthalate
RL: **MOA (Modifier or additive use);** PRP (Properties); USES (Uses)
(plasticizer; elec. conductive antistatic white **rubber** compns. contg. alkali metal salts or alk. earth metal salts with good resistance to bleeding and vulcanized compns. therefrom)

RN 37684-52-9 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(2-carboxybenzoyl)-.omega.-[(2-carboxybenzoyl)oxy]- (9CI) (CA INDEX NAME)